Guidelines

for

Preparation of

Synopsis and Thesis

for

Master of Technology (M.Tech) Degree

In

VLSI Design

Electronics Product Design and Technology

Embedded systems

Information Technology

Centre for Development of Advanced Computing,
Mohali, Punjab

Synopsis Format for M.Tech Thesis

Title page:

1. Name of Student and PTU registration No cum Roll No
2. Present official Address with E-mail, telephone No
3. Branch (indicate F.T./P.T.)
4. Year of Admission
5. Number of subjects passed till date
6. Proposed Topic:

Components of the synopsis

1. **Title:** The title should be given in capital letters. It should be concise and specific, and must reflect the proposed research programme.
2. **Introduction:** Importance, scope and nature of the work proposed for research should be well presented. (Should not exceed 3 pages including Figs.)
3. **Brief Literature survey :** Given orientation to the research being reported by referring to the previous concepts/literature and explain how the proposed research has been built on the basis of past work, Latest and Specific references should be included. (should not exceed 3 pages)
4. **Problem formulation:** Need and significance of proposed research work The hypothesis of the proposed research problem should be identified on the basis of gap(s) in scientific knowledge/literature about the problem. (should not exceed 1page)
5. **Objectives:** Objectives of the proposed studies should be clearly identified and presented. A few pertinent references may be included in the introduction to authenticate that there is a gap in the knowledge/science about the proposed research. (should not exceed 1 page)
6. **Methodology/ Planning of work:** The research work should be planed in accordance with the objectives framed and clearly mention the Methodology/ planning of the proposed work. (should not exceed 2 pages)

7. **References:** List all the references should be written according to the IEEE reference format as given in annexure
8. **Facilities required:** Mention the Software /Hardware and other required facilities for the proposed research work.

GUIDELINES FOR M.Tech. THESIS

1. The thesis shall be computer typed (English- British, Font -Times Roman, Size-12 point) and printed on A4 size paper.
2. The thesis shall be hard bound with cover page in light green colour. The name of the candidate, degree (specifying the specialization), year of submission, name of the University including college name shall be printed in black on the cover [Refer sample sheet (outer cover)]
3. The thesis shall be typed on one side only with 1.5 spacing with a margin 3.5 cm on the left, 2.5 cm on the top, and 1.25 cm on the right and at bottom.
4. In the thesis, the title page [Refer sample sheet (inner cover)] should be given first then the Certificate by the candidate and the supervisor(s) in sequence, followed by an abstract of the thesis (not exceeding 1500 words). This should be followed by the acknowledgment, list of figures/list of tables, notations/nomenclature, and then contents with page no's .
5. Mathematical and Chemical equations /formulae should be carefully written in the equation writer in MS word. Equations should be placed in the proper position in the centre of the page.
6. The reference should be given at the end of the Thesis according to the IEEE reference format as given in annexure A. References should be in alphabetical order indicating
    i) The authors name and his initials
    ii) The title of the paper and name of the journal
    iii) The name of the book and the publisher
    iv) The number of the volume, page numbers, and the year of publication
    v) Standard abbreviation may be used in the names of the journals
7. The diagrams should be printed on a light/white background; Tabular matter should be clearly arranged. Decimal point may be indicated by full stop (.). The caption for Figure must be given at the BOTTOM of the Fig. and Caption for the

Table must be given at the TOP of the Table.

8. The graphs should be combined for the same parameters for proper comparison. Single graph should be avoided as far as possible.
9. Conclusions must not exceed more than two pages.
10. The thesis must consist of following chapters
    - Chapter 1- Introduction
    - Chapter 2- Literature Review
    - Chapter 3- Present work (It can span in two to three sub chapters depending on the type and volume of the work)
    - Chapter 4- Result and Discussion
    - Chapter 5-Conclusions and future scope
    - References
    - Appendix or Annexure-I, II, III (if any)

SAMPLE SHEET (OUTER COVER)

DESIGN AND IMPLIMENTATION OF A NETWORK TOOL

(24pt.)

THESIS (14pt.)

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF (12pt.)

MASTER OF TECHNOLOGY
(Computer Science/Electronic (14pt.)

SUBMITTED BY

RAJINDER KUMAR (14pt)
Univ Roll No

PTU Logo

PUNJAB TECHNICAL UNIVERSITY
JALANDHAR, INDIA (14pt.)

April 2007

SAMPLE SHEET (INNER TITLE PAGE)

VHDL Implementation of OFDM

Transmitter & Receiver

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE

AWARD OF THE DEGREE OF

MASTER OF TECHNOLOGY (VLSI DESIGN)

SUBMITTED BY: -

PAWAN KUMAR VERMA

UNIVERSITY ROLL NO.: M-76718181

CENTRE FOR DEVELOPMENT OF ADVANCE COMPUTING, MOHALI

PUNJAB TECHNICAL UNIVERSITY

JALANDHAR, PUNJAB

JUNE 2009

SAMPLE SHEET -DECLARATION

Centre for Development of Advanced Computing, Mohali

CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the thesis entitled "TITLE" by "NAME OF THE STUDENT" in partial fulfillment of requirements for the award of degree of M.Tech. (Branch) submitted in the Department of (Branch) at NAME OF THE INSTITUTE under PUNJAB TECHNICAL UNIVERSITY, JALANDHAR is an authentic record of my own work carried out during a period from _____ to_____under the supervision of NAME OF SUPERVISOR(S). The matter presented in this thesis has not been submitted by me in any other University / Institute for the award of M.Tech Degree.

Signature of the Student

This is to certify that the above statement made by the candidate is correct to the best of my/our knowledge

Signature of the Supervisor(s)

The M.Tech Viva –Voce Examination of (NAME OF CANDIDATE) has been held on _____ and accepted

Signature of Supervisor(s) **Signature of External Examiner**

Signature of H.O.D.

ACKNOWLEDGEMENT

The creation of a project requires the combine sincere efforts, hard work, talents and blessings of great people, who directly or indirectly contribute to project-report. This project is no exception and I owe special gratitude to several persons.

I am highly grateful to **Sh. D.K. Jain , Director** Centre for Development of Advanced Computing (C-DAC) Mohali for providing this opportunity to carry out the present thesis work.

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I deem it as a proud privilege to express my sincerest regards and gratitude to **Ms. Manjit Kaur**, Engineer ACS Division, Centre for Development of Advanced Computing (C-DAC) Mohali, who is the thesis Supervisor, for the invaluable support he gave me on many occasions and for many interesting discussions on many topics and theories related to this research. Without his valuable suggestions I would not have been able to complete this project. His knowledge in both academics and industry made her an invaluable source of guidance for the presented work.

The help rendered by **Ms. Vemu Sulochana**, Project Engineer-II and **Mr. Anurag Singh,** Project Associate

for the literature, experimentation is greatly acknowledged.

I am thankful to my parents whose blessings gave me enough strength from time to time and helped me at every possible step.

Finally, I indebted to all whosoever have contributed in this thesis work.

Karishma Bajaj

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LIST OF TABLES *(SAMPLE SHEET)*

S. No. **Description** **Page**

RULES AND REGULATIONS
M.Tech. Thesis

R.1: AREAS OF SPECIALIZATION

Specific areas (thesis topics) will be decided by the departments

(a) Based on faculty research interests, **OR**
(b) Based on mutual interest/interdisciplinary **OR**
(c) Based on areas of other sponsored research projects.

R.2: DEPARTMENT RESEARCH COMMITTEE (DRC)

A Department Research Committee (DRC) consisting of the following will complete all the formalities of the research work of the candidate, from synopsis evaluation till final submission including yearly evaluation of candidate performance:

(i) Executive Director or Nominee.
(ii) HOD/Coordinator ACSD.
(iii)Three faculty members.
(iv)Supervisor/supervisors
(v)One External Expert of the relevant area. (only for mid-term evaluation)

R.3: M.TECH. SUPERVISOR/GUIDE

3.1 All faculty members of the Institute holding M.Tech./ ME and Doctorate degree are eligible to guide M. Tech scholars.

3.2 No Guide shall have more than five M.Tech scholars. The Guide can take subsequent candidates after submission of Synopsis.

3.3 The guide allotment will be decided by the concerned department.

R.4: SYNOPSIS OF THESIS

4.1 Candidates are required to give, prior to submission of synopsis, one Seminar open presentation in presence of DRC.

4.2 Candidates will be required to submit 5 copies of synopsis before the synopsis presentation

4.3 DRC may accept, suggest, and outright reject the proposal

4.4 Upon the successful approval of proposal of candidate will be asked to pursue the work.

4.5 Candidates are required to give midterm progress report and presentation to the DRC.

4.6 Candidates are required to complete their thesis work within the time period as per PTU norms.

R.5: THESIS SUBMISSION

5.1 The research scholars are required to present his/her M.Tech research work before the supervisor/coordinator before the final submission of the thesis.

5.2 The research scholars must have at least one paper in reputed international Journal or conference proceedings before the final submission of the thesis.

5.3 Upon the completion of work, candidate will be required to present his work before the DRC. After successful defense of the work, candidates will be allowed to submit 05 Thesis copies as per the given Performa to the ACS Division.

5.4 Supervisor would submit a panel of minimum three external examiners, accompanied by four copies of long abstract of the thesis and list of the major references to the HOD/Coordinator ACSD. Panel should include the full particulars containing designation, area of specialization; Email ID, Complete Address, and Contact number etc. of examiners.

Annexure A

SAMPLE REFERENCES, IEEE FORMAT

Book

[1] P.M. Morse and H. Feshback, *Methods of Theoretical Physics*. New York: McGraw Hill, 1953.

Journal Article

[2] S.K. Kenue and J.F. Greenleaf, " Limited angle multifrequency diffiaction Tomography ," *IEEE Trans. Sonics Ultrason*., vol. SU-29, no. 6, pp. 213-2 17, July1982.

New edition of a book

[3] C. Brusaw, C. Aired, and W. Oliu, *Handbook of Technical Writing*, 3rd ed. New York: St. Martin's Press, 1987.

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[4] G.J. Broadhead, "Style in technical and scientific writing." In M.G. Moran and D.Joumet, eds. *Research in Technical Communication. A Bibliographic Sourcebook*, pp. 379-401. Westport. CT: Greenwood Press, 1985.

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[6] Interview [or Personal Communication] with Prof. Elmer Hixon, BCE Department, The University of Texas at Austin, March 12, 1995. [Date omitted if unknown.]

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[7] *Handbook for Writing Operation and Maintenance Manuals*. Washington, D.C.: Packaging Machinery Manufacturers Institute, 1973.

[8] *Interface Circuits Data Book*, Texas Instruments, Austin, Texas, 1993.

[9] *User's Guide: Microsoft Word*, Vers. 5.0, Microsoft, 1991.

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No author given:

[10] "Sonar," *Encyclopaedia Brittanica*, 1984 ed.

Author(s) given:

[11] A.D. Pearson, J.B. MacChesney, and W.G. French, "Fiber optics," in *Encyclopedia of Semiconductor Technology*, M. Grayson, Ed., New York: John Wiley & Sons, 1984.

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[12] "Greyhound," *Brittanica Online*, Beta Version 96.1, March 1996.

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Patent

[16] L.O. Norman, U.S. Patent 4 379 752, 1983. [Title of patent may be included.]

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[17] "Technology threatens to shatter the world of college textbooks, *The Wall Street Journal*, vol 91, pp. Al, A8, June 1, 1993.

Government publication

[18] *Basic Facts about Patents*. Washington, D.C.: Government Printing Office, 1989.

Technical Report

[19] R. Cox and J. S. Turner, "Project Zeus: design of a broadband network and its application on a university campus," Washington Univ., Dept. of Comp. Sci., Technical Report WUCS-91-45, July 30, 1991.

Letter/E-mail

[20] Letter from J. M. Beck, Project Manager, TI, Bedford, Utah, Sept. 3, 1996.

Software

[21] M. Janzen, *Instant Access Accounting*. Computer software. Nexus Software, Inc IBM-PC, 1993.

Electronic bulletin board

[22] AIDS Info BBS. [San Francisco (CA): Ron Gardner]. Available from: 415-626-1246.

Database/online

[23] R. Duncan, "An HTML primer," *PC Magazine*, June 13, 1995, v14, n11 p. 261(7) in Academic Index (database on UTCAT PLUS system).

[24] R. Berdan and M. Garcia, *Discourse-Sensitive Measurement of Language Development in Bilingual Children* (Los Alamitos, CA: National Center for Bilingual Research, 1982) (ERIC ED 234 636).

World Wide Web (give author and title if named)

[25] Fuminao Okumura and Hajime Takagi, "Maglev Guideway On the Yamanashi Test Line," *http://www.rtri.or.jp/rd/maglev2/okumura.html*, October 24, 1998.

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PROCEDURES

1. In the body of your text refer to the source of your information by inserting consecutive numbers in brackets at the end of each segment of cited information—like this [1]. These reference numbers can also be inserted within a sentence [2], without changing the sentence's punctuation. You may also cite your reference in your text as follows: "As Smithsky [3] points out,

2. Unless you are referring to a complete book or article, you will also need to identify the page number(s) of your source of information. Indicate exact page numbers of a source within your brackets after a comma [4, pp. 3-6], or by a simple rhetorical device in your text such as "However, on page 79 of [5] the author seems to contradict himself when he states. . . If you must refer to more than one separate page or source in the same reference, use semicolons for separation: [6, p. 46; 7, pp. 29-31; 9, pp. 8-12].

3. Once you have numbered a source use the same number for all subsequent references to that source. References at the end of quotation marks "are punctuated with the period after the reference" [8, p. 23].

REFERENCE PAGE FORMAT

- Always use square brackets around reference numbers [10, pp. 78-85] to distinguish from equation numbers, which are given in parentheses (6).
- Single space individual references, with no indentation for a second or third line. Double space between separate references.
- Use a common abbreviation for a journal title if there is one, e.g. *IEEE Electron Device Lett.* Otherwise give the full name of the journal.
- End each entry with a period.
- List each source only once on your reference page